

WHAT IS CLAIMED:

1. A device for clamping and ablating cardiac tissue comprising:

a first handle member;

a second handle member;

first and second mating jaw members associated with the first and second handle members, respectively, the jaw members being movable by the handle members between a first open position and a second clamped position, the jaw members having insulated outer surfaces with convex, opposed mating surfaces, each mating surface having a central peak, the central peak of the first jaw being aligned with the central peak of the second jaw;

a first elongated electrode extending along the central peak of the first jaw member;

a second elongated ablation electrode extending along the central peak of the second jaw member;

the first and second ablation electrodes being adapted to be connected to an RF energy source so that, when activated, the first and second electrodes are of opposite polarity; and

one of the first and second mating jaw members having at least one thermocouple on its mating surface for measuring the temperature of tissue held between the jaw members, the thermocouple being adapted to be connected to a remote monitoring device.

2. The device of claim 1 wherein the electrodes are between approximately 3 to 8 cm in length and approximately 0.12 to 0.6 mm in width.

3. The device of claim 1 wherein the electrodes comprise gold-plated copper.

4. A tissue grasping apparatus comprising:

first and second grasping jaws, the grasping jaws being relatively moveable between open and closed positions; each jaw including a raised electrode and a receding clamping surface in face-to-face relation with the electrode and clamping surface of the other jaw; the clamping surfaces of the jaws comprising an insulating material and the raised, face-to-face electrodes being of opposite polarity and connectible to a power source for providing an electrical current between the electrodes; one of the first and second grasping jaws having at least one thermocouple on its clamping surface for measuring the temperature of tissue held between the grasping jaws, the thermocouple being adapted to be connected to a remote monitoring device.

5. The apparatus of claim 4 wherein the electrodes are between approximately 3 to 8 cm in length and approximately 0.12 to 0.6 mm in width.

6. The apparatus of claim 4 wherein the electrodes comprise gold-plated copper.